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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,645	05/07/2007	Jens Kleinfeld	3778	3553

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MICHAEL J. STRIKER
103 EAST NECK ROAD
HUNTINGTON, NY 11743

EXAMINER

ROCHE, JOHN B

ART UNIT	PAPER NUMBER
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2184

NOTIFICATION DATE	DELIVERY MODE
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10/07/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

striker@strikerlaw.com

Office Action Summary	Application No. 10/583,645	Applicant(s) KLEINFELD, JENS	
	Examiner JOHN ROCHE	Art Unit 2184	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1 and 3-10 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1 and 3-10 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 15, 2010 has been entered.

Claim Objections

Claims 4-5 and 9-10 are objected to because of the following informalities:

In claim 4, line 1, "one of claims" should be –claim–.

In claim 4, lines 2 and 3, "a second data-processing control unit" does not have antecedent basis in claim 1. For the purpose of prosecution on the merits, this component will be treated as simply –a data-processing control unit in the PC–.

In claim 9, lines 4-5, neither the "first data-processing control unit" nor the "second data-processing control unit" has antecedent basis in claim 1, from which it depends. For the purpose of prosecution on the merits, these components will be treated as they were in the previous Office Action.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hohner et al. (US 5,437,044), hereafter referred to as Hohner'044 in view of Searls (US 5,333,277), hereafter referred to as Searls'277.

Referring to claim 1, Hohner'044 teaches a memory-programmable control, aka SPS (stored program control 10 as seen in figure 1 and column 3, lines 39-40) for coupling to a data interface of a personal computer (programming device 19 as seen in figure 1 and column 4, line 7), the PC having a user interface (picture screen 20 and keyboard 23, see figure 1, column 4, lines 7-9), a memory (memory of the programming device, column 4, line 18) and a control unit for function assignment (programming device is a standard computer, see figure 1 and column 4, lines 7-10), the SPS comprising: means for operating the inputs and outputs of the SPS, the means including keys for tripping machine functions (operating unit 12 as seen in figure 1 and column 3, line 52; keypad 13 as seen in figure 1 and column 3, line 53), wherein the keys are embodied as pushbuttons (keypad 13 as seen in figure 1 and column 3, line 53), provided in addition to the user interface of the PC, are each electrically connected

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directly to one of the SPS inputs (multi-pole plug 15 as seen in figure 1 and column 3, lines 55-56) at the same time that the PC is coupled to the SPS (with two parallel plug connections, both the PC and the operating unit can be connected to the control device at the same time, column 2, lines 62-66); wherein one of a plurality of key levels, each with selected meanings, stored in memory in the PC, for the pushbuttons is selectable from the user interface of the PC (programming device 19 can modify the program of control device 10 as seen in figure 1 and column 4, lines 16-19; program control takes place using program in memory of device 19 as seen in figure 1 and column 4, lines 19-21); a control unit for flag assignment connected directly to the SPS inputs and thus to the external pushbuttons and to the PC (microcomputer within SPC 10 as seen in figure 1 and column 3, lines 45-47), wherein the control unit for flag assignment receives the information about a key allocation of the pushbuttons in a particular key level upon selection (key on screen blinks responsive to actual key being actuated, column 5, lines 10-12) and links this information with a pushbutton applied to an SPS unit (coordination of functions of keyboard 23 for key functions of keypad 13 as seen in figure 1 and column 4, lines 59-61), and wherein upon selection of any of the keys, a respective surface function of the PC, stored in the memory and assigned to both the machine function and to the key's respective key allocation is tripped (left upper part of keypad 23 implements functions of keyboard 13 of operating unit 12, with the same representations, see figure 1 and column 4, lines 66-68).

Hohner'044 does not appear to explicitly teach the keys connected parallel to the SPS inputs and to an internal bus of the PC.

However, Searls'277 teaches a parallel connection of peripherals both to one another and to a PC (SCSI devices accessible in parallel, column 17, lines 38-39).

Searls'277 is analogous to Hohner'044 because they are both drawn to the same inventive field of data manipulation in computers.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Hohner'044 and Searls'277 before him or her, to modify Hohner'044's system to include the parallel SCSI connection of Searls'277 by including a SCSI port in the control unit and the programming device.

The motivation for doing so would have been to achieve maximum parallelism in the system (column 17, lines 42-44).

Therefore, it would have been obvious to combine Searls'277 with Hohner'044 to bring about the invention as claimed.

As to claim 3, Hohner'044 teaches the device as defined by claim 1, wherein a first data processing control unit, connected to the pushbuttons, is provided in the PC (control unit in computer housing 22 as seen in figure 1 and column 4, lines 8-9), which first data processing control unit receives the information about the surface buttons assigned to the pushbuttons (program in control device 10 is read into programming device 19 as seen in figure 1 and column 4, lines 16-18) and links the information with a pushbutton signal, applied by the internal bus, to make a starting signal for the surface functions assigned to that pushbutton (coordination of functions of keyboard 23 for key functions of keypad 13 as seen in figure 1 and column 4, lines 59-61).

As to claim 4, Hohner'044 teaches the device as defined by claim 1, wherein a second data-processing control unit is provided in the PC, which second data-processing control unit is connected to a screen of the PC and receives the information about a key label (video controller is necessary to transfer information to the screen of a PC), corresponding to the key allocation, so that the key allocation of the particular key level selected can be displayed on the screen of the PC by means of a key label (cause a key on a screen to change upon actuation of a physical key, column 5, lines 10-15).

As to claim 5, Hohner'044 teaches the device as defined by claim 4, wherein the second data processing control unit receives status information about the pushbuttons from the control unit for flag assignment via the data interface (representation of the operating unit 12, including keypad 13, is shown on picture screen 20 as seen in figure 1 and column 4, lines 55-57), and wherein the visual display of the key label of the individual pushbuttons is dependent on the status information about the individual pushbuttons (cause a key on a screen to change upon actuation of a physical key, column 5, lines 10-15).

As to claim 6, Hohner'044 teaches the device as defined by claim 4, wherein the pushbuttons are located in the vicinity of the screen of the PC in such a way that a direct relationship with the key label and/or pushbutton status information on the screen can be established by the user of the device (representation of the operating unit 12,

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including keypad 13, is shown on picture screen 20 as seen in figure 1 and column 4, lines 55-57; cause a key on a screen to change upon actuation of a physical key, column 5, lines 10-15).

As to claim 7, Hohner'044 teaches the device as defined by claim 4, wherein the software in the PC is embodied such that the key label can be displayed in reserved areas of the screen that are not coverable by other display functions (cause a key on a screen to change upon actuation of a physical key, column 5, lines 10-15).

As to claim 8, a central memory unit is inherent to the functionality of a PC.

Hohner'044 and Frenzel'917 do not appear to explicitly teach the device as defined by claim 1, wherein for each selectable key level one data matrix is stored, and wherein each of the pushbuttons is assigned a data line containing information that is allocated in columns to different purposes, which is stored with said data matrix.

While Hohner'044 does teach the storage of data pertaining to the pushbuttons (programming device 19 reloads modified program to memory of the control device 10 as seen in figure 1 and column 4, lines 19-23; coordination of functions of keyboard 23 for key functions of keypad 13 as seen in figure 1 and column 4, lines 59-61), the use of a data matrix for each selectable key level, in which matrix each of the pushbuttons is assigned a data line containing information that is allocated in columns to different purposes, is an alternative arrangement of the art.

At the time of invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Hohner'044 and Frenzel'917 before him or her, to incorporate the device as defined by claim 1, characterized in that in the PC, for each selectable key level one data matrix is stored, in which matrix each of the pushbuttons is assigned a data line containing information that is allocated in columns to different purposes because the use of a data matrix in memory is a common practice in the art.

The motivation to combine these teachings would have been to facilitate linking the functionality of the controller with the computer keys (coordination of functions of keyboard 23 for key functions of keypad 13 as seen in figure 1 and column 4, lines 59-61).

Therefore, it would have been obvious to modify the teachings of Hohner'044 and Frenzel'917 to bring about the invention as claimed above.

As to claim 9, Hohner'044 teaches the device as defined by claim 8, wherein a central control element for level control is provided in the PC, which acts as a data shunt between the central memory unit, the first data-processing control unit, the second data-processing control unit embodied as a key display, and the SPS control unit for flag assignment (CPU on a front-side bus linking components is inherent in a computer).

As to claim 10, Hohner'044 teaches the device as defined by claim 9, wherein the data matrix, for each pushbutton, further stores one SPS function flag, corresponding to

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the allocation of the pushbutton in the selected key level (operating functions in keypad 13 as seen in figure 1 and column 3, lines 37-39), one SPS feedback flag (actuation of key activates corresponding function, column 5, lines 16-19), one piece of label information (appearance of corresponding key, column 4, lines 11-15), and one PC function identification, assigned to the allocation of the pushbutton, of the surface function (operating function imparted to each key on the keypad, column 2, lines 13-16); and wherein the first data-processing control unit receives the information on PC function identification (keys on keyboard given operating functions, column 2, lines 32-34), the second data-processing control unit receives the information on labeling (appearance of corresponding key, column 4, lines 11-15), and the control unit for flag assignment receives the information on SPS function flags and SPS feedback flags via the control element level control from the central memory unit (programming device 19 reloads modified program to memory of the control device 10 as seen in figure 1 and column 4, lines 19-23).

Response to Arguments

Applicant's arguments with respect to claims 1 and 3-10 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that the combination of Hohner and Frenzel would not have taught the parallel connections of the invention as shown.

Examiner respectfully submits that, in light of the change of the scope of the rejection, pertaining to the citation of Searls, the arguments are now moot.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN ROCHE whose telephone number is (571)270-1721. The examiner can normally be reached on 9-5, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry W.H. Tsai can be reached on 5712724176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JR

/Henry W.H. Tsai/
Supervisory Patent Examiner, Art Unit 2184